LISTING OF THE CLAIMS

The following listing, if entered, replaces all prior versions of the claims in the present application.

1.   (**Currently Amended**) A network device comprising:

an output port;

a first queue coupled to the output port;

a control unit coupled to the output port;

a **second** queue configured to store a copy of a packet forwarded to the output

port; and

a memory coupled to the output port,

   wherein the output port is configured to output **the** packet[[s]] for

      transmission via a network tunnel,

   wherein outputting the packet for transmission comprises removing

      the packet from the first queue and storing a copy of the

      packet in the second queue,

   wherein the network tunnel aggregates a plurality of flows,

   wherein the memory is configured to store information,

   wherein the information identifies packets which have been forwarded via

      the network tunnel, and

   wherein the **second** queue indicates how many packets in each of the

      flows are outstanding within the network tunnel.

2-3.   (Canceled)

4.   (Previously Presented) The network device of claim 1, wherein

the memory is comprised in the control unit; and

the control unit is configured to update the information in the memory to indicate

      that the packet was sent via the network tunnel, in response to forwarding

      the packet to the output port.

5.   **(Currently Amended)** The network device of claim 1, wherein

the control unit is configured to send a copy of the packet to a loopback port with

which the queue is associated, and

the copy of the packet is stored in the **second** queue in response to the packet

being ~~receiving~~ **received** by the loopback port.

6.   (Previously Presented) The network device of claim 1, wherein

the control unit is configured to identify a flow of the plurality of flows being

aggregated for transmission via the network tunnel,

the flow comprises a particular packet, and

the control unit is configured to select whether the particular packet is admitted to

the network tunnel based on which flow comprises the particular packet.

7.   **(Currently Amended)** The network device of claim 6, wherein

the control unit is configured to drop the particular packet if the flow currently has

a threshold number of packets stored in the **second** queue; and

the control unit is configured to admit the particular packet for transmission via

the network tunnel if the flow currently has fewer than the threshold

number of packets stored in the **second** queue.

8.   **(Currently Amended)** The network device of claim 1, wherein

the control unit is configured to forward the copy of the packet stored in the

second queue to the output port for retransmission via the network tunnel

if the packet is dropped in the network tunnel.

9.   (Original) The network device of claim 8, wherein

the control unit is configured to determine that the packet was dropped in the

network tunnel in response to the information stored in the memory and in

response to information received from another network device.

10. **(Currently Amended)** The network device of claim 8, wherein the control unit is configured to send the copy of the packet stored in the **<u>second</u>** queue via the network tunnel if the copy of the packet is dropped in the network tunnel.

11. **(Currently Amended)** The network device of claim 1, wherein the control unit is configured to control a usage level of the **<u>second</u>** queue by adjusting a rate at which packets are removed from the **<u>second</u>** queue, and the control unit is configured to admit a particular packet for transmission via the network tunnel based on the usage level of the **<u>second</u>** queue.

12. **(Currently Amended)** The network device of claim 11, wherein the control unit is configured to reduce the rate at which packets are removed from the **<u>second</u>** queue if the usage level of the **<u>second</u>** queue exceeds a threshold usage level.

13. (Previously Presented) The network device of claim 1, wherein the control unit is configured to forward a new packet to the output port for transmission via the network tunnel if no packets have been transmitted via the network tunnel for a period of time.

14-28. (Canceled)

29. **(Currently Amended)** A method comprising:
sending a packet via a network tunnel from a first network device, wherein
<u>the network device comprises an output port and a first queue coupled to the output port, and</u>
the network tunnel aggregates a plurality of flows;
<u>removing the packet from the first queue and</u> storing a copy of the packet in a **<u>second</u>** queue, in response to the packet being sent via the network tunnel, wherein the **<u>second</u>** queue indicates how many packets in each of the flows are outstanding within the network tunnel; and
determining whether the packet is dropped in the network tunnel.

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30.   (Canceled)

31.   **(Currently Amended)** The method of claim 29, wherein the storing the copy of packet in the **second** queue comprises:

sending the copy of the packet to a loopback port of the first network
device, wherein the loopback port is associated with the **second**
queue.

32.   **(Currently Amended)** The method of claim 29, further comprising:
removing the copy of the packet from the **second** queue if the determining
whether the packet is dropped in the network tunnel determines that the
packet was successfully received at an egress of the network tunnel.

33.   **(Currently Amended)** The method of claim 29, further comprising:
sending the copy of the packet from the **second** queue via the network tunnel if
the packet is dropped in the network tunnel.

34.   (Previously Presented) The method of claim 29, further comprising:
identifying a flow of the plurality of flows being aggregated for transmission via
the network tunnel, wherein the flow comprises a particular packet; and
selecting whether the particular packet is admitted to the network tunnel based on
which flow comprises the particular packet.

35.   **(Currently Amended)** The method of claim 29, further comprising:
controlling a usage level of the **second** queue; and
admitting a particular packet for transmission via the network tunnel dependent
on the usage level of the **second** queue, wherein the controlling the usage
level of the **second** queue comprises: adjusting a rate at which packets are
removed from the **second** queue.

36.   (Original) The method of claim 29, further comprising:

sending information to the first network device, wherein the information indicates

      whether the packet was dropped in the network tunnel.

37.   (Previously Presented) The method of claim 36, further comprising:

storing the packet in an egress queue if the packet is received out of sequence by a

      second network device.

38.   **(Currently Amended)** The method of claim 37, further comprising:

removing the packet from the egress queue in response to receiving at least one

      packet via the network tunnel, wherein

        the at least one packet is earlier in a sequence of packets than the packet;

          and

forwarding the packet in response to the removing the packet from the **egress**

      queue.

39-47. (Canceled)

48.   **(Currently Amended)** A system comprising:

means for sending a packet via a network tunnel from a first network device,

      wherein

        the network device comprises an output port and a first queue

          coupled to the output port, and

        the network tunnel aggregates a plurality of flows;

means for **removing the packet from the first queue and** storing a copy of the

      packet in a **second** queue, in response to the packet being sent via the

      network tunnel, wherein the **second** queue indicates how many packets in

      each of the flows are outstanding within the network tunnel; and

means for determining whether the packet is dropped in the network tunnel.

49.   (Canceled)

50.   **(Currently Amended)** The system of claim 48, wherein storing the copy

of packet in the **second** queue comprises:

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sending the copy of the packet via a loopback port associated with the
second queue.

51.   **(Currently Amended)** The system of claim 48, further comprising:

means for removing the copy of the packet from the **second** queue if it is
determined that the packet was successfully received at an egress of the
network tunnel.

52.   **(Currently Amended)** The system of claim 48, further comprising:

means for sending the copy of the packet from the **second** queue via the network
tunnel if the packet is dropped in the network tunnel.

53.   (Previously Presented) The system of claim 48, further comprising:

means for identifying a flow of the plurality of flows being aggregated for
transmission via the network tunnel, wherein the flow comprises a
particular packet; and

means for selecting whether the particular packet is admitted to the network
tunnel based on the flow in which the particular packet is comprised.

54.   **(Currently Amended)** The system of claim 48, further comprising:

means for controlling a usage level of the **second** queue; and

means for admitting a particular packet for transmission via the network tunnel
dependent on the usage level of the **second** queue, wherein controlling the
usage level of the **second** queue comprises:

adjusting a rate at which packets are removed from the **second** queue.

55-59. (Canceled)

60.   **(Currently Amended)** A computer readable medium comprising
program instructions executable to:

send a packet via a network tunnel from a first network device, wherein
**the network device comprises an output port and a first queue
coupled to the output port, and**

the network tunnel aggregates a plurality of flows;

remove the packet from the first queue and store a copy of the packet in a

second queue, in response to the packet being sent via the network tunnel,

wherein the **second** queue indicates how many packets in each of the

flows are outstanding within the network tunnel; and

determine whether the packet is dropped in the network tunnel.

61.   (Canceled)

62.   **(Currently Amended)** The computer readable medium of claim 60,

wherein storing the copy of packet in the **second** queue comprises:

sending the copy of the packet to a loopback port associated with the

second queue.

63.   **(Currently Amended)** The computer readable medium of claim 60,

wherein the program instructions are further executable to:

remove the copy of the packet from the **second** queue if it is determined that the

packet was successfully received at an egress of the network tunnel.

64.   **(Currently Amended)** The computer readable medium of claim 60,

wherein the program instructions are further executable to:

send the copy of the packet from the **second** queue via the network tunnel if the

packet is dropped in the network tunnel.

65.   (Previously Presented) The computer readable medium of claim 60,

wherein the program instructions are further executable to:

identify a flow of the plurality of flows being aggregated for transmission via the

network tunnel, wherein the flow comprises a particular packet; and

select whether the particular packet is admitted to the network tunnel based on the

flow in which the particular packet is comprised.

66.   **(Currently Amended)** The computer readable medium of claim 60,

wherein the program instructions are further executable to:

control a usage level of the **second** queue; and

admit a particular packet for transmission via the network tunnel dependent on the

usage level of the **second** queue, wherein

controlling the usage level of the **second** queue comprises:

adjusting a rate at which packets are removed from the **second**

queue.

67-71. (Withdrawn)

72. **(New)** The network device of claim 1, wherein the control unit is configured to:

generate a descriptor that identifies the second queue;

encapsulate the packet, wherein encapsulating the packet comprises adding a

header to the packet, wherein the header comprises the descriptor; and

forward the packet to the first queue.

73. **(New)** The network device of claim 1, wherein the control unit is configured to:

detect the number of packets in the first queue;

detect the number of packets in the second queue; and

drop the packet in response to detecting that the number of packets in the first

queue exceeds a first threshold value or the number of packets in the

second queue exceeds a second threshold value.

74. **(New)** The network device of claim 1, wherein the control unit is configured to:

detect a first number of packets in the second queue having a first flow label;

detect a second number of packets in the second queue having a second flow

label;

drop a packet having a first flow label if the first number exceeds a first threshold

value; and

drop a packet having a second flow label if the second number exceeds a second

threshold value.

75.   (**New**) The network device of claim 1, wherein the control unit is

configured to:

detect the second queue is full;

drop an oldest packet in the second queue;

update a stored number of times the oldest packet has been dropped;

in response to the stored number exceeding a threshold value, decreasing the rate

at which packets are output for transmission via the network tunnel.